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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,882	06/14/2006	Makoto Watanabe	OKA-0235	9743
74384 7590 11/29/2008 Cheng Law Group, PLLC 1100 17th Street, N.W. Suite 503 Washington, DC 20036				
EXAMINER				
TSAY, MARSHA M				
ART UNIT		PAPER NUMBER		
1656				
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11/20/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/582,882

Applicant(s)

WATANABE ET AL.

Examiner

Marsha M. Tsay

Art Unit

1656

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-10 is/are pending in the application.
4a) Of the above claim(s) 1-3, 9 and 10 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 4, 5, 7 and 8 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

This Office action is in response to Applicants' remarks received September 4, 2008.

Applicants' arguments have been fully considered and are deemed to be persuasive to overcome some of the rejections previously applied. Rejections and/or objections not reiterated from previous Office actions are hereby withdrawn.

Claim 6 is canceled. Claims 1-3, 9-10 are withdrawn. Claims 4-5, 7-8 are currently under examination.

Objections and Rejections

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-5, 7-8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Veronese et al. (1975 Acta vitamin. Enzymol. (Milano) 29: 243-247; IDS 08.27.07).

Claim 4 has been interpreted as such: A method for enrichment/separation of a modified peptide (said modified peptide has an amino acid residue modified with an aromatic hydrocarbon

group), said method comprising separating the modified peptide by using a media comprising an aromatic hydrocarbon group.

Veronese et al. teach the selective separation of tryptophan derivatives using sulfenyl halides. Veronese et al. teach peptides reacted with 2-nitro sulfenyl chloride (NPS-Cl) (NPS-derivatives) facilitate identification of tryptophan peptides, as well as separation by chromatography (p. 243-244). On page 245, Veronese et al. further teach that sulfenyl halides can also be used for the covalent binding of tryptophan derivatives (i.e., a modified peptide having a tryptophan residue modified with an aromatic hydrocarbon group) to a solid support, thus facilitating their separation (p. 245 column 1). The solid support resin is reacted with 2,4-dinitrophenyl-1,5-disulfenyl chloride (DNPDS-Cl), therefore adding sulfenyl function to the support, which will facilitate separation of the tryptophan peptide derivatives, since said peptide derivatives will selectively bind to said support (p. 245 column 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of Veronese et al. for the separation of a modified peptide having an amino acid residue modified with an aromatic hydrocarbon (NPS-derivative) comprising the step of using a media comprising an aromatic hydrocarbon group (DNPDS-Cl) for the separation step (claims 4-5, 7-8). The motivation to do so is given by Veronese et al. which disclose that a support comprising media with a phenyl group can be used to selectively bind and separate tryptophan derivatives (i.e., a modified peptide having a tryptophan residue modified NPS-Cl).

In their remarks, Applicants traverse the rejection of claims 4-8 under 35 U.S.C. 102(b) as being anticipated by Boccu et al. (1970 Eur J Biochem 13: 188-192). Applicants assert that

Boccu et al. teach a method for the separation and purification of a protein/peptide using a sephadex column which only contains π electrons. However, Boccu et al. do not teach or suggest a column comprising a media with an aromatic hydrocarbon group and taking advantage of the π - π electron interaction between the aromatic hydrocarbon group of the media and the aromatic hydrocarbon group of the peptide to assist in the enrichment/separation of the peptide.

In view of Applicants' remarks, the Boccu et al. reference has been withdrawn in view of Applicants' amendments and remarks. However, the Veronese et al. reference is believed to be relevant art in view of Applicants' amendments and remarks. The instant claims recite using a media comprising an aromatic hydrocarbon group to separate a peptide having an amino acid residue modified with an aromatic hydrocarbon group. Veronese et al. teach using a support comprising a media with an aromatic hydrocarbon group can facilitate the separation of peptides having an amino acid residue modified with an aromatic hydrocarbon group due to selectively binding.

No claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marsha M. Tsay whose telephone number is (571)272-2938. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon Weber can be reached on 571-272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Maryam Monshipouri/

Primary Examiner, Art Unit 1656

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